

**Foot and Mouth – Five Years On:  
The Legacy of the 2001 Foot and Mouth Disease Crisis  
for Farming and the British Countryside**

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**Summary**

February 20<sup>th</sup> 2006 marks the fifth anniversary of the official notification of the outbreak of Foot and Mouth Disease (FMD) in the UK. The FMD crisis of 2001 cost an estimated £8billion, wreaked havoc on farming and the countryside, and caused the postponement of a General Election. This report takes stock, 5 years on from the outbreak, and considers the legacy of the crisis for farming and the countryside since fading from the public eye. First, it describes some of the main features of the epidemic. It then goes on to examine the key changes in disease control, farming and rural policy that have been put in place as a result of the crisis, and explores some of the unintended consequences.

## Executive Summary

- On February 19<sup>th</sup> 2001, a Veterinary Inspector spotted suspected symptoms of Foot and Mouth Disease (FMD) in pigs at an abattoir in Essex. The next day, FMD was officially confirmed and so began an unprecedented crisis for British farming and the countryside. By the time the epidemic ended that September, more than 2,000 premises had been infected, with animals culled on more than 10,000 farms in all. In total, almost 6.5 million animals were slaughtered, making this the largest slaughter of its kind in history. According to the National Audit Office, the crisis cost an estimated £8 billion.
- This paper reflects on the legacy of the FMD crisis five years on. First, it recounts some of the main controversies surrounding the epidemic. It then examines the key changes in disease control, farming and rural policy that have been put in place as a result of the crisis, and explores some of the unintended consequences.

### *Disease Control and Management*

- *Biosecurity*: The years since the 2001 crisis have seen a raised awareness of biosecurity around the farming industry. The scale of the damage of the 2001 outbreak has meant that farmers and officials are generally more appreciative of some of the risks and more on their guard. However, questions remain over whether farmers have sufficient incentive to improve biosecurity.
- *Precautionary Movement Restrictions*: Movements of farm animals between holdings are now regulated through a standstill rule. The rule represents a political compromise between the scientific advice about risks and concerns about the costs that would fall on the farming industry. However, there are also reports that this rule is widely misunderstood and broken.
- *Alternative Control Strategies*: The UK's approach to combating animal disease has remained broadly the same since the FMD crisis. Stamping out is the basic philosophy, through culling of infected animals and those animals that may have been at risk of being exposed to the disease. Vaccination remains a theoretical option.
- *More Fundamental Responses*: Reforms have focussed on improving contingency planning and the introduction of standstill rules to better control animal movements. Far less attention has been given to more fundamental responses to the 2001 crisis, which might involve consideration of animal densities in livestock farming areas, the costs and benefits of disease-free status, and the financial responsibility for disease control and management.
- *Closing the Countryside*: It was recognised that closing the countryside was a costly mistake and the limited economic role of farming in rural economies is now more widely understood. Contingency planning now refers to the need to have regard to the impact on the rural economy. However, in the midst of crises, governments can be pushed into taking drastic measures, and there has been insufficient lesson-learning around how in 2001 an animal disease became a rural economy crisis.

### *Changes to Institutions and Policies*

- *From agriculture to rural policy*: The 2001 crisis revealed the extent and diversity of the rural economy and its vulnerability to a farm crisis. The emphasis on rural economic development in the immediate recovery period (e.g. through rural regeneration programmes) was soon eclipsed after the Department for Environment, Food and Rural Affairs (Defra) was established. Remote rural economies remain weak and suffer persistent problems of low productivity and incomes.

- *From MAFF to Defra:* In Whitehall, instead of the 'Department of Rural Affairs' that was envisaged before the 2001 Election and intended to raise the profile of rural affairs within government, Defra is a sprawling ministry in which rural affairs have been eclipsed. As an advocate of rural policy, Defra has been no match for other ministries and their strong pursuit of urban policy. National resourcing for rural development has been passed over to Regional Development Agencies (RDAs) in England, but they have become preoccupied with urban development. Within Defra, there remains an emphasis on the well-being of farmers, and European rural development funding has been concentrated on payment schemes to farmers with less than 4% of the money in England available to non-farming recipients.
- *Institutional change:* FMD triggered institutional change and led to the demise of the Countryside Agency and the Regional Tourist Boards, and an enhanced role for RDAs in support for rural economic and social development. At the national level, rural affairs policy has lost its way, and energies have been focussed on merging and abolishing countryside institutions.

#### *Compensation and Rural Economies*

- *Economic assistance and compensation:* During the crisis, losses of revenue to non-farming businesses in rural areas amounted to billions of pounds. Overall, the measures aimed to assist businesses in the wider rural economy were relatively small-scale, piecemeal and complex. Central Government allocated just £39 million of new money to a Business Recovery Fund. In comparison, the Government compensated farmers for their loss of livestock during the crisis by some £1.34 billion.
- *Rural economies:* Five years on from the crisis, economic conditions in many rural areas remain fragile, particularly in those sparsely populated and more agriculturally-dependent areas often worst affected by the crisis. For the two worst affected counties, Cumbria and Devon, economic growth has lagged further behind the national average. Gross weekly pay is on average more than 13% lower in rural areas compared to urban, and there remain almost a million households in England's most sparsely populated rural areas, which have an income of less than 60 per cent of the English median.

**19<sup>th</sup> February 2006**

## **Introduction: The UK's 2001 Foot and Mouth Disease Outbreak Five Years On**

On February 19<sup>th</sup>, 2001, Craig Kirby, a Veterinary Inspector with the Meat Hygiene Service, spotted symptoms of Foot and Mouth Disease (FMD) in pigs at Cheale Meats abattoir in Essex. Kirby reported his observations to the Ministry of Agriculture, Fisheries and Food (MAFF) and halted all operations at the abattoir. MAFF immediately began tracing the farms that had been the sources of the pigs and placed movement restrictions within a 5-mile radius of each farm. On February 20<sup>th</sup> FMD was confirmed by laboratory testing and the European Commission was informed of the outbreak. The following day, February 21<sup>st</sup>, the European Commission banned all meat and live animal exports from the UK in accordance with European Union FMD control legislation.<sup>1</sup> In the UK, this decision was immediately seen as yet another blow to an already beleaguered farming industry, even before the full extent of the epidemic was known. It took seven months for the disease to be wiped out. The last case of FMD in 2001 was confirmed on September 30<sup>th</sup>, with the final total of confirmed cases standing at 2026. Animals were also culled on contiguous premises. During the seven months that the epidemic lasted, almost 6.5 million animals were slaughtered in all. The cost of the epidemic has been estimated at £5 billion to the private sector and £3 billion to the public sector (National Audit Office, 2002). This was the most damaging and destructive outbreak in a hitherto FMD-free country anywhere in the world.

Powerful imagery surrounded FMD's immediate impact on agriculture, with huge pyres and burial pits for slaughtered animals providing the dominant motif. If this imagery alone did not give the impression that the countryside was a 'no-go' area, the unprecedented implementation of blanket footpath closures — intended to prevent accidental transmission of the disease by the public — certainly did. Over and above the widespread disruptions of rural activities brought about by disease control measures, there was a strong sense of a national crisis. The survival of many rural businesses outside of agriculture, especially in tourism and leisure, was threatened as the public were discouraged or prevented from visiting the countryside. With the spread of the disease out of control, local elections and a General Election were postponed, the Prime Minister took charge and the army was called in.

The FMD crisis seemed to challenge dominant representations of the countryside and its functions by illuminating underlying rural realities that normally remain hidden or implicit. It did this because it followed the logic of the virus rather than prevailing social or institutional structures. The virus spread horizontally — far and wide as a result of surprisingly extensive animal movements — and in doing so it laid bare a host of connections (local interdependencies and long-distance linkages between localities). By the time FMD was

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<sup>1</sup> Commission Decision 2001/145/EC.

discovered in Essex, it had already taken hold on at least 57 farms in 16 counties. It was as if a stage normally illuminated by spotlights was momentarily illuminated instead by footlights.

In August 2001 the Government announced that there would be three separate inquiries to look into the lessons from the FMD crisis. One was to look at the future of the food and farming industries (Policy Commission on the Future of Food and Farming, 2002), a second was to investigate the scientific issues around animal disease (Royal Society, 2002), and a third — the so-called 'Lessons to be Learned Inquiry' — examined the institutional response and policy implications. The Lessons to be Learned Inquiry published its report on July 22<sup>nd</sup> 2002. It focused on the poor state of contingency planning and the extent of animal movements, and paid particular attention to the use of science, calling in the army, whether to vaccinate, and the nature of communications and lines of responsibility among those managing the response to the outbreak. At the end of a short chapter on the economic impact of FMD, the Lessons to be Learned Inquiry report (2002, p.139) concluded:

The way ahead for agriculture, including animal disease control, must be seen in the context of an overall strategy for the rural economy in which the agricultural sector is but one of a number of interests. In the heat of the 2001 epidemic, policy was driven mostly by the urgent needs of the agricultural sector. In longer term planning for future contingencies, a wider range of interests must be considered.

The aim of this report is to take stock, 5 years on from the start of the 2001 outbreak, and consider what lasting impacts and influence the crisis has had on farming, disease control and rural policy since fading from the public eye. First, it explains how the crisis served as such a revelation about animal disease, disease control, and the nature of rural economies in the UK. It recounts some of the main controversies surrounding the epidemic, examines the key changes in policy and practice that have been put in place as a result of the crisis and explores some of the unintended consequences of the crisis.

The crisis not only caused havoc for those farmers, vets and officials involved, but also rendered visible a whole host of issues around farming and the countryside that had previously been little understood. The FMD crisis was therefore a **revelation**. It was a revelation in lots of different ways, but two in particular stand out. *First*, the crisis revealed the complacency in the ways that animal disease issues had come to be approached and managed within the farming industry. Sloppiness in precautionary disease control measures were compounded by the effects of changes in the farming industry, which led to higher stocking densities and many more animals being moved about, more frequently, and over longer distances. The sheer number of animal movements was even a surprise to MAFF. Well into the crisis, the Ministry had to double its initial estimate of one million animal movements during the month of February to two million (Lessons to be Learned Inquiry, 2002, p.30).

Second, the crisis revealed the role of farming in the countryside and rural economies. In particular, profound misconceptions about the role and relative importance of farming were rapidly over-turned, and the complexity of the relationships between farming and other rural businesses were starkly revealed. Farming interests, and the Prime Minister, had exhorted people to stay away from the countryside. Early in the outbreak the President of the National Farmers' Union, Ben Gill, said:

It is imperative that every local council which has rural footpaths and rights of way within its boundaries closes them immediately. There must be a blanket ban across the country. I implore everyone again: please, please stay away from the countryside (quoted in Lessons to be Learned Inquiry, p.63).

On the same day the Prime Minister, in his internet broadcast, said:

... though we are not at direct risk from this disease, we can play a part, unknowingly, in spreading it. FMD is a highly infectious virus which can be picked up by us on our boots, clothes and cars and carried many miles. By staying away from farmland, by keeping off any footpaths through or next to farms or open land with livestock, we can help the efforts to eradicate this disease. We are giving local authorities today the power to enforce the temporary closure of footpaths and rights of way, but we hope people will voluntarily stay away in any case (quoted in Rural Task Force, 2001, para. 6.4).

It was two weeks later, and twenty days into the crisis, before the potential impacts of 'countryside closure' on tourism and other rural businesses began to attract public and press attention. Surveys for the Government's Rural Task Force during the crisis revealed more than 40% of rural businesses as being adversely affected by the crisis as people stayed away from visiting rural areas. Over a third of affected businesses in the South West said they had lost more than a quarter of their revenue, and about 20% of those in Devon said they had lost more than half (Rural Task Force, 2001 p.12).

The economic loss in rural areas was later estimated to be between £2.2 billion and £2.5 billion, while the loss in urban areas was £0.8 - £1 billion. The vast majority of these costs related to reduced spending on domestic tourism (Lessons to be Learned Inquiry, 2002, p.134). The Government estimated that the revenue loss to the English tourist industry for March to October 2001 exceeded £3 billion (Rural Task Force, 2001, p.13). The GDP loss to the whole of the South West in March and April was estimated at just over 3%, while lost turnover was around £760 million (Lessons to be Learned Inquiry, 2002, p.85).

Financial assistance to the wider rural economy took the three main forms. *First*, the Government extended support to local authorities to offer rate relief to businesses suffering hardship. However, many local authorities were slow to put schemes in place, preferring

instead to allow deferral of payments (Rural Task Force, 2001, p.18). *Second*, the Inland Revenue and Customs and Excise allowed businesses suffering losses to apply to defer tax, VAT and national insurance payments without incurring interest. Firms, of course, had to pay eventually but this measure did help with cash flow problems. *Third*, the Government temporarily extended the criteria for its Small Firms Loans Guarantee Scheme to enable firms affected by FMD to borrow to invest. However, uptake was extremely limited, with only 6 new loans (totalling £200,000) taken up by October 2001 under the extended criteria. *Finally*, the Government established a £51 million Business Recovery Fund, offering grants to businesses and administered by the RDAs. The Fund consisted of £39 million extra Government funding and £12 million re-prioritised by the RDAs. RDAs committed £5.7 million from the Fund to business advice, and £10.1 million to other measures, mainly promotion of tourism (Rural Task Force, 2001, p.44).

Overall, the measures aimed to assist businesses in the wider rural economy were relatively small-scale, piecemeal and complex. In comparison to the £39 million of new money for the wider rural economy, the Government compensated farmers for their loss of livestock during the crisis by some £1.34 billion (Lessons to be Learned Inquiry, 2002, p.132).

### **Disease Control and Management**

Although contingency planning for an FMD outbreak in the UK prior to 2001 met the requirements of EU regulations, it proved wholly inadequate for the scale of the epidemic. Since the 2001 epidemic, the Government has developed a new contingency plan for exotic diseases (with specific sections on FMD and Avian Influenza). The Animal Health Act 2002 requires that this plan be reviewed annually. Between January and June 2004 a major national simulation was carried out to test the decision making and implementation structures of the then current contingency plan. The results of the simulation fed into the most recent review and the current plan was presented to Parliament in July 2005. The stated aims of the plan (Defra, 2005) in guiding the selection of a disease control strategy for any outbreak are to:

- Minimise the number of animals which need to be slaughtered either to control the disease or on welfare grounds, and which keeps animal welfare problems to a minimum;
- Cause the least possible disruption to the food, farming and tourism industries, to visitors to the countryside, and to rural communities in the wider economy;
- Minimise damage to the environment and protecting public health; and
- Minimise the burden on taxpayers and the public at large.

The current contingency plans have also sought to minimise any similarity to the elements of the 2001 strategy that caused the most controversy and damage: the use of mass pyres, blanket footpath closures and vaccination. Pyres are relegated to the bottom of the disposal hierarchy, with the added proviso that these will be on-farm and that "Defra has no plans to use mass pyres" (Defra 2005, p.48). Favoured methods of disposal are in commercial incinerators and rendering plants, and provisions have been made to ensure these facilities will be more readily available than in 2001. A veterinary risk assessment of the dangers of members of the public spreading FMD by footpath use has concluded the risk of this is minimal and can further be reduced by simple information provision and, at worst, and subject to further veterinary risk assessment, local closures in 3km Protection Zones. Vaccination has been given lengthy consideration and is now an integral part of the contingency plan. Although its use will be subject to strategic decisions in any given outbreak, there is now a commitment to maintain the capacity to vaccinate quickly if the decision is made. As well as 'suppressive vaccination' (which means the animals would still subsequently be slaughtered under disease control measures) the plan includes the possibility of using 'protective vaccination' or a 'vaccinate-to-live' scenario. Defra's Science Advisory Council considers 'vaccinate-to-live' as being more widely acceptable than a vaccinate-to-kill strategy, as the main attraction of using vaccination over slaughter would be to reduce the total number of animals slaughtered. Overall, vaccination is considered a risky strategy because there is not enough evidence to guarantee its effectiveness, and a vaccinate-to-live scenario could lead to a prolonged period of surveillance and monitoring before a final 'exit point' from export controls was reached (Defra Science Advisory Council, 2004).

Within the 'decision tree' of the contingency plan there is still a lot of room for 'political' decisions to be made during an outbreak, especially over which mix of approaches to use. More importantly, Defra describes the contingency plan as a "living document"<sup>2</sup>, which will change through response to new threats, new research and the regular process of annual review and stakeholder input. This process in itself is therefore much more open to influence. At the moment, the central thrust of the contingency plan is speedy stamping out through slaughter. This much has not changed. Currently, a swift resolution to a small outbreak can be seen as the least controversial solution for all concerned, but this might not always be the case. Moreover, there is little evidence to suggest that some of the more fundamental questions raised by the FMD crisis have been addressed. These might involve consideration of animal densities in livestock farming areas; consideration of the costs and benefits of disease-free status; and shifting the burden of disease control and management onto the farming industry (Campbell and Lee, 2005).

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<sup>2</sup> <http://www.defra.gov.uk/footandmouth/contingency/index.htm>



A new dimension was added to FMD control in the UK with the introduction of epidemiological modelling. During the epidemic this scientific input was crucial to politicians for gaining credibility for the contiguous culling, despite this often being openly contested locally. The model of the ad hoc FMD Science Group set up by the UK's Chief Scientific Advisor (at the Prime Minister's request) during the crisis has been formalised in a requirement from the EU to constitute an FMD Expert Group in accordance with Directive 2003/85/EC which states that:

Member States shall create a permanently operational expert group, which is composed of epidemiologists, veterinary scientists and virologists in a balanced way, to maintain expertise in order to assist the competent authority in ensuring preparedness against an outbreak of foot-and-mouth disease.

In the UK, this group will include "invited experts on environmental and rural issues".<sup>3</sup> As well as the purely FMD-related expertise, scientific knowledge has moved squarely and openly to the centre of Defra policy-making, underpinning its mission of sustainable development.

The twin goals of our next science and innovation strategy will be to ensure access to a broad knowledge base and to the analytical and deliberative capabilities needed to underpin policy making and manage risk; and to use innovation strategically to achieve our policy priorities and key outcomes (Defra, 2004, para. 3)

An addition to the science based policy-making portfolio of Defra arrived with the establishment in February 2004 of the Science Advisory Council (SAC). The SAC is composed of independent experts from outside of Defra, who provide advice to Defra's Chief Scientific Advisor (CSA) and through the CSA to ministers.<sup>4</sup> The SAC has an oversight and evaluation role and its work is conducted transparently with notes of meetings and reports made publicly available. Institutional changes such as the FMD Expert Group and the Defra SAC portray a desire for clear, traceable advice, in part to help build trust in the wake of FMD and earlier crises such as BSE.

One significant change affecting livestock farming practice that has occurred in the wake of FMD is the introduction of a standstill rule for animals being traded between holdings. Since August 2003, the bringing animals onto a farm has triggered a standstill requirement, meaning that no animals can be moved off the farm for a set period. Such a rule already existed for pigs and this period was 20 days. The standstill period introduced for other livestock in the aftermath of FMD is 6 days (Defra and Welsh Assembly Government, 2003). Notably, Defra's Science Advisory Council Epidemic Diseases sub-group have argued that there is no scientific

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<sup>3</sup> <http://www.defra.gov.uk/footandmouth/pdf/fmd-roleofexpertgroup.pdf>

<sup>4</sup> <http://www.defra.gov.uk/science/how/advisory.htm>

basis for selecting this period over the optimum standstill period of 13 days recommended by the Royal Society (Defra Scientific Advisory Council, 2004). Ministers, though, balanced the burden on livestock farming of the standstill against the risks involved of spreading disease in deciding on a shorter period. Biosecurity can be costly and inconvenient. It has also been reported that there are still numerous cases of farmers breaching the standstill rule, either intentionally or as an oversight. Trading standards officials reported that there have been between 500 and 600 breaches of the standstill rule in Cumbria in the past year, with a similar number reported for Devon.<sup>5</sup>

Prior to the 2001 epidemic, the term biosecurity was little known. During the epidemic it became a watchword of the disease control strategy. Essentially biosecurity refers to methods — such as cleansing and disinfecting of vehicles, personnel and machinery — for preventing disease spreading agents from moving into or out of areas where livestock are held. During the epidemic biosecurity came to be enforced within certain key geographical areas — the so-called 'blue-boxes' (Donaldson and Wood, 2004). Since the epidemic, biosecurity has reverted to an essentially voluntary activity, although the Animal Health Act 2002 requires that guidance on biosecurity be produced by government. The *Animal Health and Welfare Strategy for Great Britain* (Defra, 2004) now sets out objectives to promote Farm Health Planning as an holistic approach to animal welfare and disease prevention. However, preparation of a Farm Health Plan is still not a statutory requirement. (There remains a reluctance within Defra to link on-farm biosecurity practices to farmer compensation in the event of an outbreak after such provisions were removed from the 2002 *Animal Health Bill* as a result of opposition in Parliament)<sup>6</sup>. The stated aim in the *Strategy* is to work with stakeholders to identify best practice and promote this through training and partnership with various bodies involved in animal health. However, implementing a widespread, holistic, farm health approach, including appropriate routine biosecurity measures, could be hampered by a noted lack of large-animal vets in practice (House of Commons Environment, Food and Rural Affairs Committee, 2003).

### **Rural Policies and Institutions**

The most obvious change in the institutional landscape that resulted from FMD was the demise of the Ministry of Agriculture Fisheries and Food. MAFF was strongly criticised over the handling of FMD, both for its seemingly slow response and its over-centralisation and bureaucratic inertia<sup>7</sup>. MAFF was replaced with the Department for Environment, Food and

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<sup>5</sup> BBC Radio 4 'Farming Today This Week', 18<sup>th</sup> February 2006.

<sup>6</sup> Q185, Commons Select Committee on Public Accounts, Minutes of Evidence, 23/02/05.

<sup>7</sup> Anderson, 2002 giving oral evidence to the Commons Select Committee on Environment, Food & Rural Affairs, Minutes of Evidence 23/7/02.

Rural Affairs immediately following the 2001 General Election. This was a significant reform to central government structures for it was the first time in over a century that there was no "Minister for Agriculture" at the Cabinet table. The change served to distance the new department from MAFF's perceived failings and signalled a potential step change in rural policy-making — away from agriculture towards a more integrated approach to the development of rural areas. Proposals for a Department of Rural Affairs had been mooted prior to the FMD epidemic as a potential means of reforming MAFF into a more territorial department responsible for integrated rural development, including the development of agriculture (Ward, 2000). A process of internal review about the future of MAFF was underway within central government prior to the FMD epidemic. However, the creation of Defra diverged from the arrangements for a Department of Rural Affairs that were in preparation. Indeed, the birth of Defra was more an "unplanned merger" than a result of careful planning.<sup>8</sup> The new department was, as the Guardian described it at the time, "cobbled together"<sup>9</sup> following the election. The inclusion of environmental protection, including the major areas of climate change, international environmental negotiations, water quality and waste management, in its portfolio was reported at the time to be a result of demands made by its new Secretary of State, Margaret Beckett, when discussing her responsibilities with the Prime Minister during his reshuffle. Defra's new Permanent Secretary explained events to the House of Commons Environment, Food and Rural Affairs Committee as follows:

What was planned was the implementation of the stated Manifesto commitment of the Labour Party which was for the creation of a Department for Rural Affairs. What was unplanned was the decision in the course of 8 June that it would be a department which included environment and rural affairs (emphasis added).<sup>10</sup>

By the time of Defra's first annual review in 2002, there was still considerable lack of integration between the different elements.<sup>11</sup> The original rationale for a Department of Rural Affairs was to raise the profile and improve the handling of rural affairs policy across Government. The new department would be the "Government focal point on rural issues."<sup>12</sup> However, the period since its creation has seen Defra's policy agendas centre on environmental sustainability. Where rural affairs and rural development were once envisaged in a central and integrating role within a new department, they have effectively been marginalised by stronger policy agendas around climate change, sustainable development

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<sup>8</sup> Brian Bender, Defra Permanent Secretary, giving oral evidence to the Commons Select Committee on Environment, Food & Rural Affairs, Minutes of Evidence, 21/11/02.

<sup>9</sup> The Guardian 18/06/01, p17.

<sup>10</sup> Brian Bender, Defra Permanent Secretary, giving oral evidence to the Commons Select Committee on Environment, Food & Rural Affairs, Minutes of Evidence, 21/11/02.

<sup>11</sup> Environment, Food & Rural Affairs Select Committee, Minutes of Evidence, 19/06/2002.

<sup>12</sup> Environment, Food & Rural Affairs Select Committee Minutes of Evidence, 14/11/2001

and agri-environmental policy. Where the intention had been to raise the profile of rural affairs policy across government, the accident of history that is Defra has actually led to the opposite effect.

One of the post-FMD inquiries — the Policy Commission on the Future of Farming and Food — was charged with responsibility for charting a new strategy for agriculture. The Commission was chaired by Sir Don Curry, a livestock farmer with strong cooperative agribusiness interests, and included prominent members of the environmental and consumer lobbies as well as the chief executive of one of the largest supermarket chains. The Commission was clearly intended to give direction to the new Department and, in some respects, its membership represented Defra's new political establishment.

The Policy Commission returned to problems that the Labour Government had been recharacterising throughout its first term. The Commission was given a strong steer by the Prime Minister's Office that it was to focus on the economic and environmental sustainability of the food and farming industries, and not on the wider question of the role of these industries in rural development. The framing of this part of the lesson-learning process led the Commission to focus on a series of 'off-the-peg' solutions to past problems. Key among the Commission's recommendations was an extension of the UK's discretionary use of the modulation measures within the CAP to 'recycle' former farm-production subsidies into environmental payments, for example (Performance and Innovation Unit, 1999). It also called for an expansion of agri-environmental schemes, and measures to strengthen the market orientation of farm businesses.

In response to the Curry Commission, the Government launched its *Strategy for Sustainable Farming and Food: Facing the Future* in England on in December 2002. The Strategy was backed by £500 million of investment from the Government over the period 2003-06, although much of this has been devoted to new types of agri-environmental payments to farmers. Curry also recommended the establishment of a Food Chain Centre to improve analysis and information exchange between different sectors of food supply chains, and improved advice to farmers in improving competitiveness and marketing. Missing from the Curry report and the Government's subsequent Strategy was much of a sense of how the development of farming might be better integrated with the economic development of rural areas and rural economies. Agriculture now employs only a very small proportion of the workforce in rural areas — just 2.6% in England's rural areas, for example (Countryside Agency, 2004, p.233). It is increasingly recognised that the future economic well-being of farming families is dependent upon the strength and vibrancy of their local rural economies, which offer opportunities for off-farm employment of farm family members and for

establishing new types of rural businesses on farms. Thus, one of the best ways to help farming families is through rural development rather than interventions in the agricultural sector.

The Curry Commission reforms served to refocus attention and spending on the farming industry. As a consequence, wider rural development remains a poor relation to agricultural policy. Even the new rural development measures under the Common Agricultural Policy (CAP) remain highly focussed on making payments to farmers. The first phase of the so-called Rural Development Programmes, financed as part of the CAP, run from 2000 to 2006. In other European countries, this 'second pillar' to the CAP has been used to fund village renewal, basic services and wider rural development objectives (see Dwyer *et al.*, 2002). In the UK, the vast bulk of resources have been taken up by payments to farmers. Under 4% of funding under the £1.6 billion England Rural Development programme is available to non-farming and forestry recipients through wider rural development schemes.<sup>13</sup>

After the 2001 General Election and the establishment of Defra, the Government also embarked on a protracted process of institutional reforms to overhaul the various agencies advising government on matters relating to farming, the countryside and rural development, and delivering subsidies and grant schemes. This began with Lord Haskins's review of rural delivery (Haskins, 2003), which took a year to produce and proposed abolishing the Countryside Agency and establishing a new 'Integrated Agency' through the merging of the Countryside Agency's landscape protection and access promotion functions with the nature conservation role of English Nature.

In July 2004 the Government eventually published its full response to Haskins in the form of its *Rural Strategy 2004*. The Rural Strategy stands most strongly as a strategy for the administration of farming and land management support than any broader rural policy and delivery framework (Centre for Rural Economy, 2004). It established a new integrated agency (Natural England) to oversee farming's environmental payments and the protection of valued landscapes and biodiversity. It also transferred responsibility and funding for economic regeneration in rural areas to the Regional Development Agencies (RDAs) who will take over the Countryside Agency's socio-economic programmes. The abolition of the Countryside Agency threatened to leave no national voice for rural social concerns, but Ministers decided to set up a small Commission for Rural Communities in its stead to act as a rural advocate and watchdog.

Overall, the Rural Strategy is something of a misnomer. It is not really a Strategy and is not really rural. It is preoccupied with reforms to the institutions regulating and providing

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<sup>13</sup> [http://www.defra.gov.uk/erdp/docs/ann\\_rep.htm](http://www.defra.gov.uk/erdp/docs/ann_rep.htm) (see also ADAS Consulting and SQW Ltd, 2003).

payments and advice to farmers. The Strategy is weak in its treatment of topics such as local government, rural services, transport, the voluntary sector and rural housing, which are major rural issues in localities and raise crucial questions about delivery. Such shortcomings reflect Defra's limited experience in the non-land management aspects of rural development and illustrate how far removed from local priorities the concerns of the centre have become.

Five years on from the FMD crisis, economic conditions in many rural areas remain fragile, particularly in those sparsely populated and more agriculturally-dependent areas often worst affected by the crisis. For the two worst affected counties, economic growth has lagged behind the national average. The most recently available figures show that between 2000 and 2003, the Government's preferred measure of economic growth — Gross Value Added — increased by 13.3% in Cumbria and 15.0% in Devon compared with a national growth of 17.4% (and 17.7% for London).<sup>14</sup> Median gross weekly pay is on average more than 13% lower in rural areas (£318.20) compared to urban (£367.80) (Commission for Rural Communities, 2005, p.77), and in sparsely populated rural areas, the mean income of households in the rural markets towns and service centres is 12–15 per cent below the national average of £29,989 (p.76). There remain a total of 402,227 households, in villages, hamlets and isolated dwellings and 473,767 town and fringe households in England, which have an income of less than 60 per cent of the English median (p.79).

### **Unintended Consequences of the Foot & Mouth Crisis: Closure as an Experiment**

The culling of so many animals during the FMD crisis meant the effective removal of livestock from large tracts of the farmed landscape for an extended period in 2001. When coupled with the discouragement of public access to the countryside for walking and recreation, this effectively created the conditions for an experiment in a number of issues in the rural environment. In what follows, we briefly set out some of the findings that have emerged as a result of the countryside close-down in 2001.

For example, the FMD crisis provided new insights into, and raised new questions about, upland ecology. It was discovered that the removal of sheep from the fells in Cumbria led to a proliferation of flowering plants – some previously unknown to the area (Robert, 2002). Valuable new scientific insights into the role of farming in atmospheric emissions were also gained. Livestock farming is a significant source for emissions of a number of gases into the atmosphere, including ammonia and the greenhouse gases methane and nitrous oxide. Researchers at the Centre for Ecology and Hydrology and the Institute of Grassland and Environmental Research established intensive monitoring of ammonia in two of the worst

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<sup>14</sup> <http://www.statistics.gov.uk/pdffdir/lgva1205.pdf>

affected areas during the course of re-stocking (2002-03). The results of the monitoring revealed how ammonia concentrations did increase following restocking, and scientists were able to gain a much better understanding of the relationships between changing ammonia emissions and levels in the environment. This provides much better confidence that efforts to reduce emissions will have the desired benefits (Sutton *et al.*, 2004).

The FMD crisis also improved our understanding of the transmission of tuberculosis (TB) in cattle. The costs of bovine TB have risen from £38 million in 1999/2000 to over £90 million in 2004/05<sup>15</sup> and there is an ongoing debate over the role played by badgers in the transmission of the disease.<sup>16</sup> Much of the research into controlling bovine TB in recent years has therefore focused on the badgers as a major source of infection. The FMD crisis played a crucial role in introducing new evidence for the importance of direct cattle-to-cattle transmission. Cattle restocking following FMD led to an increase in the number of cases of bovine TB and in the geographical spread of the disease into new areas, providing valuable data for epidemiological analysis (Interdisciplinary Science Group on Cattle TB, 2004). In January 2001 it became mandatory for farmers to report all cattle births, deaths and movements to the British Cattle Movement Service, meaning that detailed data were available to epidemiologists. This post-FMD analysis has shown that cattle movements are highly significant in incidences of bovine TB (Gilbert *et al.*, 2005).

### **Concluding Comments: The Legacy of the FMD Crisis**

There was no public inquiry into the 2001 FMD crisis. Instead, the Government established three internal inquiries. These proceeded in parallel, but were distinct, separate, and reductive in their focus. This approach channelled the longer term lesson-learning process into fixed trajectories at the expense of dealing with linkages and synergies. In particular, the wider rural economy perspective fell between the three stools. In key respects, therefore, the national inquiry process reproduced the partial and agriculturally dominated perspectives that generated the wider crisis in the first place.

The neglect of the rural economic dimension in the formal learning process was a worrying indication that wider rural policy lessons from FMD would not be learned. The (mis)management of an animal disease led to a rural economy crisis, but there has been little effort to learn lessons from the FMD crisis about the inter-linkages and inter-connectedness of farming and the wider economies of rural areas. What the three official inquiry reports had to say on these holistic questions about interconnectedness is extremely weak.

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<sup>15</sup> <http://www.defra.gov.uk/animalh/tb/stats/expenditure.htm>

<sup>16</sup> <http://www.defra.gov.uk/animalh/tb/abouttb/badgers.htm>

The UK's approach to combating farm animal disease has remained broadly the same since the FMD crisis. Stamping out is the basic philosophy, through culling of infected animals and those animals that may have been at risk of being exposed to the disease. Vaccination to control the spread of the disease (so-called 'vaccinate-to-kill') was an option in 2001 and remains an option within current disease control strategy. However, preventative vaccination ('vaccinate-to-live') is not accepted because returning to disease-free status is seen to be more difficult and complicated as a result.

Since 2001, reforms have focussed on improving contingency planning and the introduction of standstill rules to better regulate animal movements. Far less attention has been given to more fundamental responses to the 2001 crisis. These might involve consideration of animal densities in livestock farming areas; consideration of the costs and benefits of disease-free status; and shifting the burden of disease control and management onto the farming industry (Campbell and Lee, 2005).

The years since the 2001 crisis have seen an increased awareness of biosecurity around the farming industry. The scale of the damage of the 2001 outbreak has meant that farmers and officials are more appreciative of some of the risks and more on their guard. However, questions remain over whether there are sufficient rural vets to be able to deal adequately with another outbreak of a serious animal disease (House of Commons Committee on Environment, Food and Rural Affairs, 2003).

It was recognised that closing the countryside was a costly mistake, and the more modest role of farming in local rural economies is now much more widely understood. Contingency planning now refers to the need to have regard to the impact on the rural economy. However, in the midst of crises, governments can be pushed into taking drastic measures. Current confusion and heightened concern that link together Avian Flu and a new human flu pandemic could easily mean an outbreak of Avian Flu precipitating sweeping and quite disproportionate actions in relation to both the poultry sector and the wider economic interests of rural areas, all sacrificed in the name of protecting the human population from the still theoretical pandemic.

The 2001 crisis revealed the extent and diversity of local rural economies in the UK and their vulnerability to a farm crisis. The emphasis on rural economy in the immediate recovery period (through rural regeneration programmes, for example) was, however, soon eclipsed after Defra was established. Remote rural economies remain weak and suffer persistent problems of low productivity and incomes.



At the national level, instead of the 'Department of Rural Affairs' that was envisaged before the 2001 Election, Defra is a large and sprawling ministry in which rural affairs have, perversely, been eclipsed. There remains a preoccupation with the well-being of farmers. National resourcing for rural development has been passed over to RDAs within England, but they have become preoccupied with 'city regions' and urban-based growth. European funding for rural development in the UK has been concentrated on agri-environmental schemes and payments to hill farmers, and minimal public funds are given over to wider rural development in programmes such as the England Rural Development Programme.

In the FMD crisis, an agriculturally-oriented disease control approach wrought havoc and extensive damage to the wider, non-farming economies in rural areas. The crisis could have served as an opportunity to rethink and improve the Government's approach to managing the role of farming in rural areas. For in many respects, the future well-being of farming families depends on the success of wider rural development, and not the other way round. After having planned to establish a Department of Rural Affairs to improve the treatment of rural affairs policy issues across government, the unanticipated outcome of the 2001 post-Election reshuffle was the creation of Defra with all its environmental protection and climate change responsibilities. The result has been the reverse of what was intended, and the treatment of rural affairs within central government has been marginalised as a result.

In the light of the difficulties in raising the profile of rural development issues in Whitehall and the regions, and of indicators about the state of health of some local rural economies, the fifth anniversary of the Foot and Mouth Crisis would be an opportune moment for the Government to review Defra's rural economy remit.

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